## (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 16 December 2004 (16.12.2004)

**PCT** 

## (10) International Publication Number WO 2004/108770 A1

(51) International Patent Classification<sup>7</sup>: 20/10, 12/08, C07C 327/18, 329/12

C08F 2/38,

(21) International Application Number:

PCT/US2004/016718

(22) International Filing Date: 27 May 2004 (27.05.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/474,538 30 May 2003 (30.05.2003) US

(71) Applicant (for all designated States except US): RENSSE-LAER POLYTECHNIC INSTITUTE [—/US]; Office of Technology Commercialization, 110 8th Street, Troy, New York 12180 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): BENICEWICZ, Brian [US/US]; 19 Loudon Heights N., Loudonville, New York 12211 (US). LI, Chunzhao [CN/US]; 332 Congress Street, Apartment 2, Troy, New York 12180 (US).

(74) Agents: GIOENI, Mary Louise et al.; HESLIN ROTHENBERG FARLEY & MESITI P.C., 5 Columbia Circle, Albany, New York 12203 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

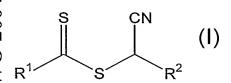
## Published:

with international search report

 before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: LOW ODOR CHAIN TRANSFER AGENTS FOR CONTROLLED RADICAL POLYMERIZATION



(57) Abstract: The present invention relates to low odor a-cyano-dithiocarboxylic ester compounds for use as chain transfer agents in free radical polymerizations, and polymerization processes employing them.